TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION Effective November 1, 2012
RC-58

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation **November 2016**.*

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

Bitec APP and SBS Modified Bitumen Roof Covering Membranes, manufactured by

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is acceptable in designated catastrophe zones along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

Bitec APP modified bitumen membranes are composed of APP (Atactic Polypropylene) resins blended with bitumen (asphalt). Bitec SBS modified bitumen membranes are composed of SBS (Styrene Butadiene Styrene) rubber blended with bitumen. Both types of membranes are reinforced with either a Spundbond polyester mat or a fiberglass mat. Several thicknesses are available with either a smooth or a granular mineral surface. Depending on the characteristics of the membrane, it may be torch applied or hot mopped.

LIMITATIONS

Method 1 – No Insulation

Design Wind Pressure: -60 psf
For All Applications: The roof deck shall be provided with positive drainage. A minimum roof slope after construction of ¼:12 is recommended. The systems shall not be loose laid, ballasted, or cold applied.

Method 2 – With Insulation

Design Wind Pressure: -52.5 psf
For All Applications: The roof deck shall be provided with positive drainage. A minimum roof slope after construction of ¼:12 is recommended. The systems shall not be loose laid, ballasted, or cold applied.

INSTALLATION INSTRUCTIONS

General Installation Requirements:
Manufacturer's installation instructions must be followed, unless otherwise specified by this product evaluation. All edge, corner, and penetration flashing shall be installed according to the manufacturer's installation instructions. All fasteners, caps, or washers shall be corrosion resistance as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.

Method 1 - No Insulation

Roof Deck: The roof deck shall consist of wood structural panels with a minimum nominal thickness of $^{15}/_{32}$ inch.

Base Sheet: One ply of Type G2 "Glasbase", "FS-2H", "PS-2H", or "FA-2T" base sheet, mechanically attached to the deck with steel cap nails. Courses shall be overlapped a minimum of 4 inches on edges.

Fasteners: The base sheet shall be attached to the roof deck using galvanized steel cap nails with a cap that is at least 1 inch in diameter and 0.032 inch in thickness. The nails shall be annular ring shank nails at least 1 ½ inches long and with a minimum shank diameter of 0.120 inches. The cap nails shall be spaced at a maximum of 7 ½ inches on center along the exposed lap and a maximum of 12 inches on center in two (2) interior rows along the center of the sheet. Center rows shall be spaced 11 inches from the exposed side laps.

Membrane: Bitec membranes "APM-4T", "APM-4.5T", "APS-4T", "SPM-4.5T", or "ISA-4T" or "Mineral Design MDA" may be heat fused to the base sheet according to the manufacturer's installation instructions. Bitec membranes "SFM-3.5H", "SFM-3.5H-FR", "SFM-4H-FR", or "SPM-3.5H" or "Mineral Design MDS" may be hot mopped to the base sheet according to the manufacturer's installation instructions.

Method 2 - With Insulation

Roof Deck: The roof deck shall consist of either wood structural panels with a minimum nominal thickness of $^{15}/_{32}$ inch or nominal 2 x 6 Southern Yellow Pine wood boards.

Base Sheet: One ply of Type G2 "Glasbase", "FS-2H", "PS-2H", or "FA-2T" base sheet, mechanically attached to the deck through the insulation. Courses shall be overlapped a minimum of 4 inches on edges.

Fasteners: The base sheet shall be attached to the roof deck using galvanized annular ring shank nails at least 2 ½ inches in length and with a minimum shank diameter of 0.0148 inches. If the insulation is more than 1 inch thick, then the length of the fastener shall be increased to fully penetrate the roof deck. The fasteners shall be installed through a formed galvanized steel disc washer with a minimum diameter of 3 inches and thickness of 0.021 inches. The nails shall be spaced at a maximum of 7 ½ inches on center along the exposed lap and a maximum of 12 inches on center in two (2) interior rows along the center of the sheet. Center rows shall be spaced 11 inches from the exposed side laps.

Insulation: Polyisocyanurate, wood fiber, or perlite insulation shall be mechanically attached to the deck with the fasteners used to attach the base sheet. The insulation may be "tacked" to the deck to hold it in place until the base sheet and the full length fasteners can be installed.

Membrane: Bitec membranes "APM-4T", "APM-4.5T", "APS-4T", "SPM-4.5T", or "ISA-4T" or "Mineral Design MDA" may be heat fused to the base sheet according to the manufacturer's installation instructions. Bitec membranes "SFM-3.5H", "SFM-3.5H-FR", "SFM-4H-FR", or "SPM-3.5H" or "Mineral Design MDS" may be hot mopped to the base sheet according to the manufacturer's installation instructions.

As an alternate for fastening to the wood structural panels, No. 12-12.5, No. 3 Phillips drive, trusshead, or $\frac{1}{4}$-inch hex-head coated steel screws and a 3-inch diameter galvanized steel plate may be used with the same spacing as for the nails. Screws shall fully penetrate the wood structural panels.

As an alternate for fastening to wood boards, No. 14-10, No. 3 Phillips drive, trusshead, or $\frac{1}{4}$-inch hex-washer-head coated steel screws and a 3-inch diameter galvanized steel plate may be used with the same spacing as for nails. Screws shall fully penetrate the wood boards.

Note: The manufacturer's installation instructions shall be on the job site during the installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.